

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/826,145	BOUDREAU, ROBERT A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tina M. Wong	2874	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_.
2. ☒ The allowed claim(s) is/are 1-56.
3. ☐ The drawings filed on \_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

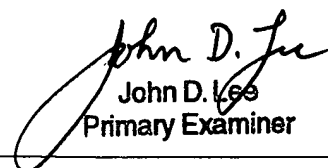
\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
    - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 062005.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date ____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>12/1/04</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                              | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other ____.   |

  
 John D. Lee  
 Primary Examiner

## **DETAILED ACTION**

### ***Drawings***

The drawings filed on 15 April 2004 are acceptable subject to correction of the informalities as indicated. Notice that all of the labels of the figures are handwritten.

Furthermore, in regards to Figure 2, solid black shadings are not permitted. 37 CFR 1.84(m)

In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

### ***Examiner's Statement Of Reasons For Allowance***

The following is an examiner's statement of reasons for allowance:

The prior art of record in this application fails to disclose or reasonably suggest a method of attaching a bulk element processing an optical beam to a PLC/first substrate and optically aligning the bulk element with an optical element formed on the PLC/first substrate comprising the steps of (a) securing a bulk element to a first side of a substrate/second substrate, (b) securing a first side of a flexure element to the first side of a substrate/second substrate, (c) securing a second side of the flexure element to the first side of the PLC/first substrate on which an optical element is formed so that a coarse alignment/first level of tolerance is made, and (d) exerting a force on at least a second side of a substrate/second substrate to thereby flex the flexure so to optically align the bulk element and optical element to a fine alignment/ second level of tolerance is made.

The closest prior art of record is U.S. Patent 6,227,724 to Verdiell. Verdiell discloses a method of attaching a bulk element (18) to a PLC/first substrate (12/32) and optically aligning the bulk element with an optical element (22) formed on the PLC/first substrate comprising the

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steps of (a) securing a bulk element (18) to a first side of a substrate/second substrate (12/32), (c) securing a second side of the flexure element (24) to the first side of the PLC/first substrate on which an optical element (22) is formed so that a rough alignment/first level of tolerance is made (Column 7, Lines 15-30), and (d) exerting a force on at least a first side of a flexure element so to flex the flexure so to optically align the bulk element and optical element to a fine alignment/second level of tolerance is made (Column 7, Lines 55-65). (Figure 1, Figure 3a) But Verdiell fails to disclose method step (b). Verdiell specifically fails to disclose a substrate/second substrate to which a flexure element is secured. Verdiell further fails to specifically disclose method step (d). Although Verdiell does disclose a second level of tolerance alignment to be made, Verdiell does not disclose a force to be exerted on a substrate/second substrate, as claimed in method step (b) in order to achieve the second level of tolerance. On the contrary, Verdiell discloses an additional tool, which exerts a force directly to the flexure element in order to achieve a second level of tolerance.

Therefore, claims 1-56 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The documents submitted by applicant in the Information Disclosure Statement have been considered and made of record. Note attached copy of form PTO-1449. None of the documents submitted by Applicant discloses or reasonably suggest the allowable subject matter discussed above.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference B discusses a method of aligning two optical devices using a flexure element. Reference C discloses a flexure element and its possible uses in optical devices.

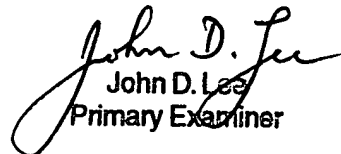
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina M. Wong whose telephone number is (571) 272-2352. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TMW



John D. Lee  
Primary Examiner